



FxPro Quant

Making the creation of Expert Advisors as easy as it gets!

User Manual



Disclaimer

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Risk warning

Contracts for Difference (‘CFDs’) are complex financial products that are traded on margin. Trading CFDs carries a high level of risk since leverage can work both to your advantage and disadvantage. As a result, CFDs may not be suitable for all investors because you may lose all your invested capital. You should not risk more than you are prepared to lose. Before deciding to trade, you need to ensure that you understand the risks involved taking into account your investment objectives and level of experience. Past performance of CFDs is not a reliable indicator of future results. Most CFDs have no set maturity date. Hence, a CFD position matures on the date you choose to close an existing open position. Seek independent advice, if necessary. Please read FxPro’s full ‘Risk Disclosure Statement’ (<http://www.fxpro.co.uk/documents/risk-disclosure-notice>).

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1.What is an Expert Advisor (EA)?

An Expert Advisor — in short an EA – is a mechanical trading system (MTS) which users can apply in order to automate their trading.

Expert Advisors can both inform the trader about a possibility to trade or even execute trades automatically by sending orders directly to the broker's trade server. EAs function on the basis of pre-programmed trading strategies that incorporate market prices analysis, money management and trade execution rules set by the creator of the trading system. In simple words, a trader can record his trading strategy and then use programming language to write a small or large trading program that will follow the conditions set to initiate and close trades.

It is important to note that EAs run locally on your personal computer and therefore for the system to function, the FxPro MT4 platform must be running and connected to our servers.

2.So, why use an Expert Advisor (EA)?

1.Organise your thoughts

The mere attempt to record and codify your strategy will make a better trader out of you. Needless to say that even if you decide to monitor your trades manually, an Expert Advisor can become a valued consultant.

2.Liberate yourself from Greed & Fear

When real money is on the line, emotions are rising high, inevitably affecting trading decisions. EAs act on the basis of a fixed-logic and therefore allow the execution of emotion-free trades.

3.Make Trading less Stressful

Trading without a pre-defined strategy can produce a lot of stress, especially when things do not go the way we hoped for. Deciding on Position opening, Lot size, Stop Loss level and actually sticking to the plan is sometimes much harder than it sounds. Using pre-programmed trading strategies, Expert Advisors can eliminate traders' anxiety since the process of making trading decisions becomes calculative and unemotional.

4.Make Trading less Time Consuming/ Identify more Trading Opportunities

How many times have you switched on your computer just to find out that you are too late for grasping a trading opportunity? And how many times were you forced to wait for hours in order to open/ monitor a trading position? After all, the currency market moves 24/5! Using an expert advisor can significantly trim down the time you spend in front of a monitor. Use your time more wisely to form a profitable trading strategy and let technology take over the long hours.

5.Avoid Trading Mistakes!

Being human makes manual trading prone to mistakes. Making trading decisions as well as submitting and managing trades may be affected by wrong calculations compromising profit potential. For example, setting wrong Stop Loss levels or miscalculating an Order's size can prove catastrophic for your investment. Trusting these otherwise manual calculations to EAs can greatly increase the accuracy of your trading, assisting this way to the achievement of much improved results.

6.Back testing, Demo trading, Strategy Optimisation and Results analysing

Creating an Expert Advisor is like performing on stage. You do not want to put on the big show before you are ready! FxPro MT4 terminal supports testing strategies on historic data where you can visualise the results on chart in order to improve and fine-tune your system to achieve optimum performance. You can compare between different versions and strategies and once you conclude, you can then test your system under current circumstances using one of our risk-free Demo accounts.

Take as much time as you want and make as many rehearsals as you deem fit so that your big show is worth staging!



Making your life easier, with FxPro Quant!

FxPro Quant is a revolutionary new tool, designed to act as your personal EA Developer!

Utilising simple “drag & drop” technologies and a plethora of inputs – such as technical indicators, mathematical functions, account info and market data – FxPro Quant enables users to create their own Expert Advisors, without requiring any MQL4 programming knowledge.

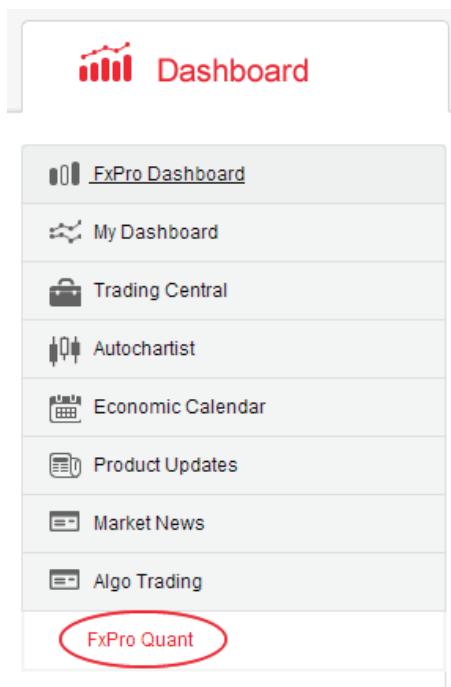
By introducing this service, FxPro virtually eliminates the “boundaries to entry” to the world of Automated Trading Robots, enabling for each and every one of our clients the use of cutting-edge technology to improve their trading performance.

Whether you want an EA to trade on your behalf or just for consulting, FxPro Quant is the way forward!

3.0 Getting Started

After logging in to your FxPro Direct account you will find FxPro Quant under our Dashboard section in the left-hand menu.

To start building your first robot, choose a name for it and click on the '**+Create New**' button.



FxPro Quant

A screenshot of the 'Create New' button in the FxPro Quant interface. The button is located at the top right of a form with fields for 'Robot name' and 'Comments'. The 'Create New' button is circled with a red oval.

Expert Advisors created and saved will be presented in a list format, available for future use or modification under the same page.

FxPro Quant

A screenshot of the 'Create New' button in the FxPro Quant interface. The button is located at the top right of a form with fields for 'Robot name' and 'Comments'. The 'Create New' button is circled with a red oval.

Name	Creation Date	Comments	Delete	Edit	Download
My Second Robot	2013-05-08 16:43:36	Implementing a more complex strategy			
My First Robot	2013-05-08 16:41:03	creating a simple EA			

These EAs can be deleted, edited or downloaded for use as per request.

4. Interface & Menu



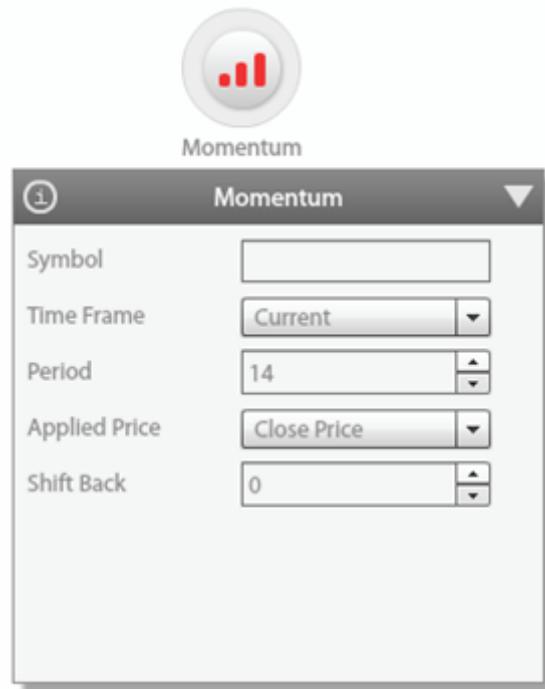
The FxPro Quant screen consists of two main parts: the ‘Components Menu’ and the ‘Main Workspace Area’.

Components Menu: It includes a list of all components available for use in order to build Expert Advisors.

The components, which are supported by the MT4 platform, are grouped into broad categories based on their functionality and use. An extended description of each function, also referred to as a ‘node’ is presented in this manual.

Main Workspace: The workspace serves as the drawing board for creating Expert Advisors (EAs). This is done by ‘dragging & dropping’ functions onto the workspace and then connecting them to each other using the available logic, in order to implement the user’s desired trading strategy.

The **Parameters Box**, as the name suggests, displays the selected node’s available parameters (if any) and allows for their customisation. These parameters are the same as on the MT4 platform.

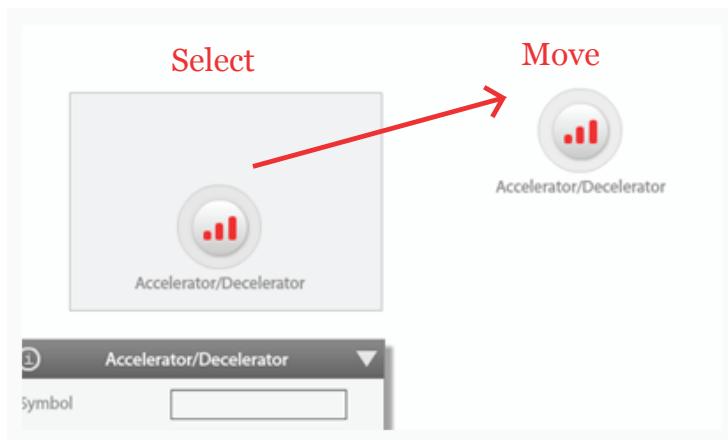


Example: Parameters available for the customisation of the ‘Momentum’ indicator.

5.Main Components & Functionality

A.Drag & Drop

FxPro Quant is designed to be simple and easy to use by everybody. To use any of its components just 'drag & drop' anywhere on the workspace area and it will be ready to use. Releasing the mouse also populates the parameters box with the node's specific parameters.



By selecting any node on the main workspace the user can move around, modify the parameters or even delete the node in question.

B.Main Component Groups

FxPro Quant Components Menu groups all functions into nine broad categories of nodes which are the building blocks for the creation of Expert Advisors.



- **Indicators** - Includes standard MT4 supported indicators and allows customisation of the same inputs as the MT4.

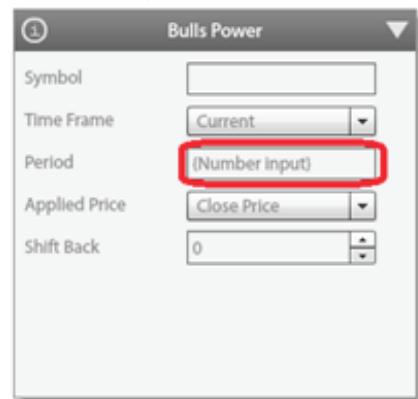
e.g Example: The Parabolic SAR system, with the same available parameters as on the MT4 platform.



- **Inputs** - These are external inputs that can be assigned to other nodes. There are four types of inputs, namely Boolean, Number, Integer and String.

e.g

Example of a 'Number input' used to set the value of the parameter 'Period' in the 'Bulls Power' indicator.

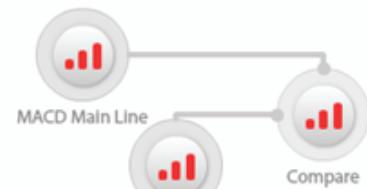


- **Math** - These are Mathematical operations used to derive values for use in our Expert Advisor models.

e.g

Example of a 'Math' node: Using the 'Max' function connected to two moving averages - set as Value1 and Value2 - will always return the maximum value of the two.

If for example MA9=4 and MA14=7 our Max(4,7)=7



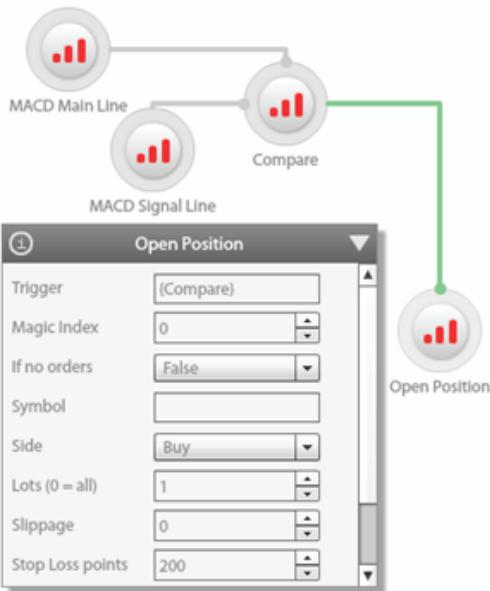
- **Logic** - Nodes used in order to connect a system's parts together. There are three logical operations: 'Compare', 'And', 'Or'.

e.g

Example of a 'Logic' node: Comparing the value of the 'MACD Main Line' (Value 1) with the value of the 'MACD Signal Line' (Value 2).

The logical statement examined here is whether Value1 \geq Value2



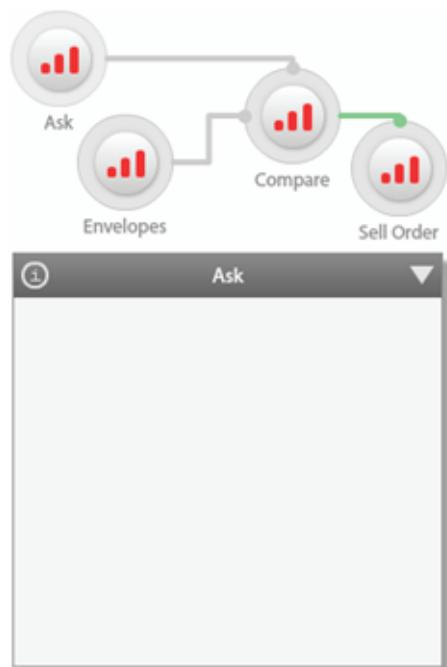


- **Trade** - Trading operations used to initiate, modify or close trades.

e.g.
Example of a ‘Trade’ node: Initiating a new trading position based on the comparison of the current value of the ‘MACD Main Line’ with the value of the ‘MACD Signal Line’.

- **Info** –Nodes which return account and market info

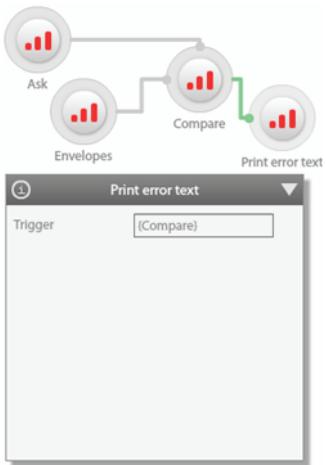
e.g.
Example of an ‘Info’ node: Using the ‘Free Margin’ level available in an account as one of the conditions for initiating a new trading position.



- **Market Data** - Instrument related data drawn from the market.

e.g.
Example of a ‘Market Data’ node: Initiating a new trading position based on the comparison of the current ‘Ask’ price with the value of the ‘Envelopes’ band.

Note that the ‘Ask’ node has no parameters to customise since it merely returns the price of the best Ask price from the market.



- **Output** - Reporting functions such as alerts and error text printing to aid with the testing of Expert Advisors.

e.g.

Example of an 'Output' node: Detecting error messages on the compare node of the previous example.

- **FxPro Library** - FxPro custom made functions intended to facilitate the creation of more complex Expert Advisor systems.

C. Connectors

Now that we know all about the main component groups, we need to learn how to combine the tools and conditions we want to use in order to build our Expert Advisor's 'logic'.

In FxPro Quant, the only way to combine nodes and form more complex logical statements is by the use of 'Connectors'.

Connectors are built in every node, so there is no use to go looking for them!

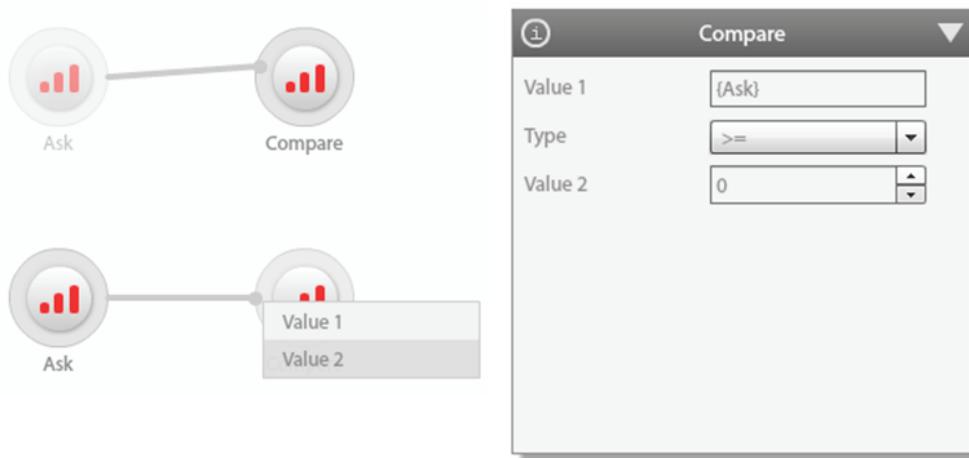


To reveal a connector, simple click anywhere on a node's outer diameter and drag the mouse.

There are four different types of connections that can be established between nodes. In order to demonstrate how these types of connections work, we will present a simple EA construction as an example:

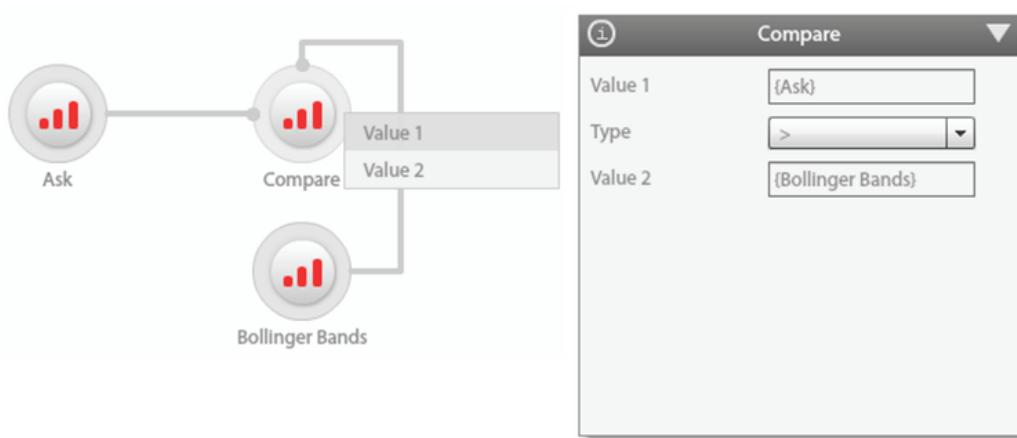
a. Comparing functions

In order to make a comparison between two nodes or even one node and a number input, drag the connector onto the compare node's outer diameter. When the mouse is released,



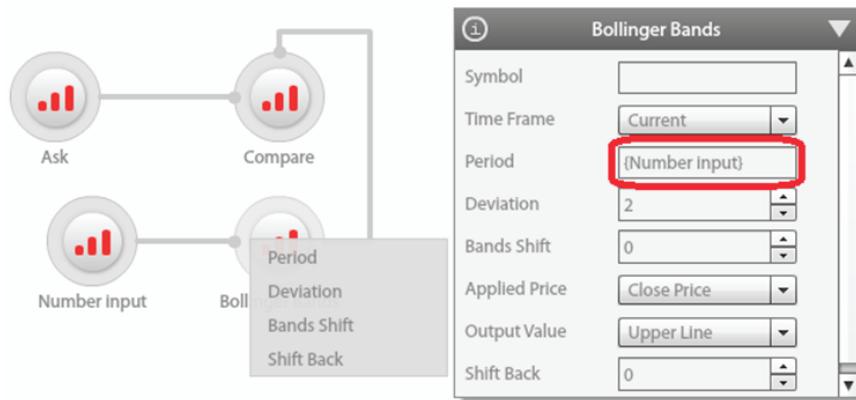
the user is prompted to select whether the newly connected node will represent Value1 or Value2 in the compare relationship. The user can then select to compare the value of the node, the 'Ask' price of the instrument in this case, with either another node's value or a number that can be typed in the 'Compare' node's Parameters Box as Value2.

Expanding on this example, let's consider that we are interested in creating an EA that sells when the underlying instrument's 'Ask' price is higher than the Bollinger Bands (BB) upper band. Setting therefore the Bollinger Bands node as Value2, the relevant field on the compare node's parameters box is populated.



b. Defining Function Values

Now consider that we wish to set an external ‘Number Input’, to be able to change the Bollinger Bands’ period when our Expert Advisor is completed. By dragging in the relevant node and connecting it to the Bollinger Bands’ node, a new window appears enquiring which parameter of the BB system we would like the number input to stand for.



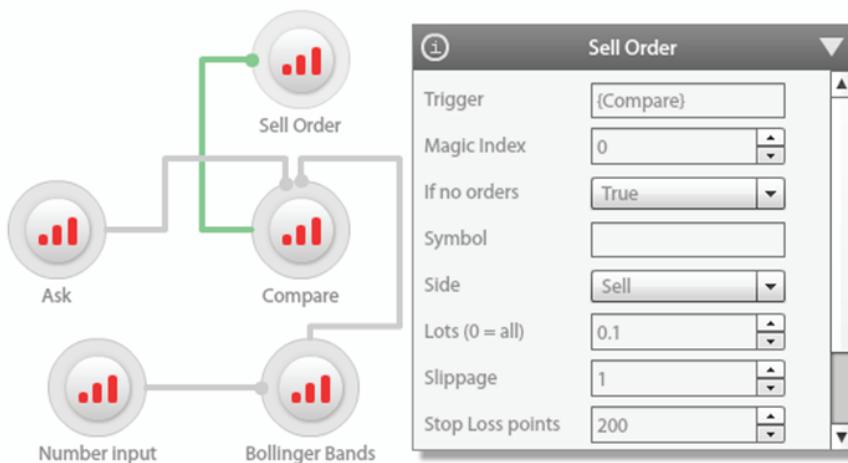
As presented in the figure above, selecting the ‘Period’ parameter will populate the relevant field in BB’s node and the length of the relevant period will thereafter be controlled by the external number input. For the sake of this example, please also note that for the BB’s ‘Output Value’ we select ‘Upper Line’ so as to compare our ‘Ask’ price with the bands’ upper line as desired.

c. Resulting Output

Having completed our input comparison structure, we now wish to command the EA to sell whenever these conditions are met.

To do so we introduce an ‘Open Order’ node from the ‘Trade’ category which we rename to ‘Sell Order’ for convenience.

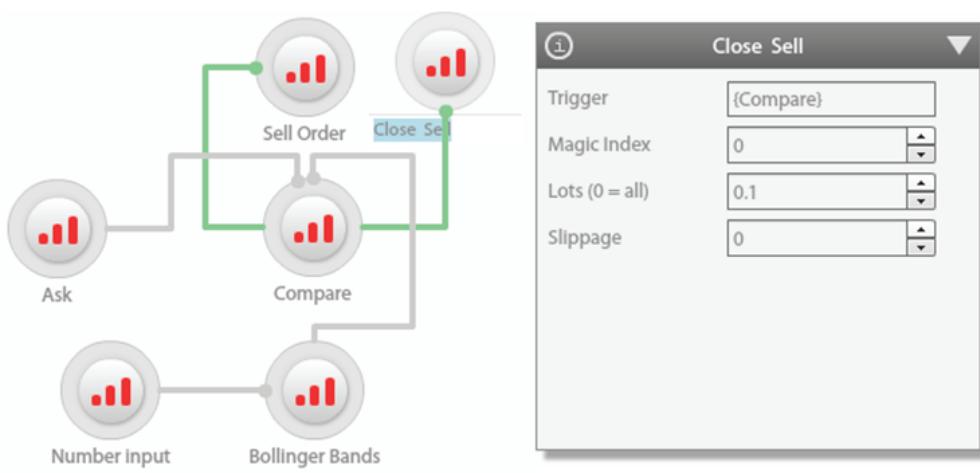
Attempting to connect the ‘Compare’ node to our ‘Sell Order’, you will notice that the connector that appears is coloured in green colour.



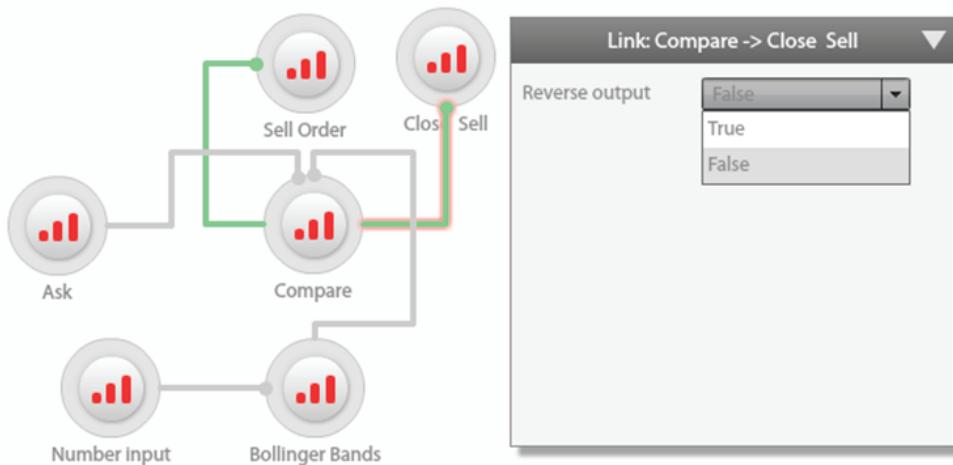
d.Reverse Output

FxPro Quant also allows us to use nodes as triggers in the event that the ‘Reverse Output’ is true. That is, a node can still act as the system’s trigger but only if the condition set is **not** met.

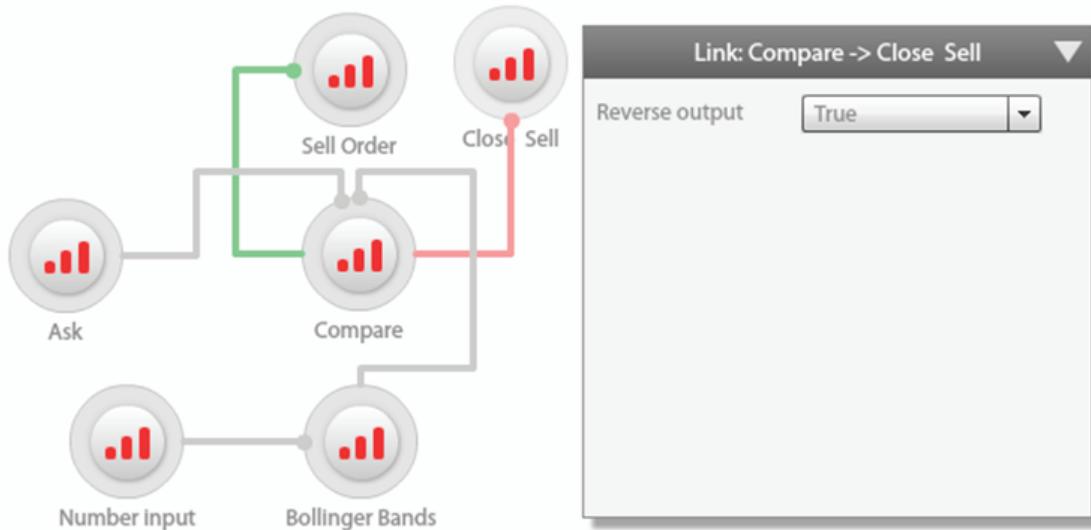
To demonstrate this functionality let’s assume that this example’s EA is required to execute a ‘Close Sell’ in the event that our condition is **not** met. That is, when the ‘Ask’ price of the underlying instrument is not higher than the upper Bollinger’s Band then the EA should close the open ‘Sell Order’. Dragging on the workspace a ‘Close Position’ node, we rename it to ‘Close Sell’ and customise its parameters.



The condition we need to set is the **exact opposite** of what we have set for our ‘Sell Order’. That is, we need to ‘Reverse’ our condition.



To do so, just click on the Connector to select it and then select ‘Reverse Output=True’ in the node’s Parameters Box.



If two Nodes do not connect, it means they are not meant to!

Connecting functions to create your system is admittedly as easy as it gets with FxPro Quant. In some cases, however, you will find that some nodes refuse to connect with each other. In those cases, it means that the logical sentence you are attempting to create makes no sense!

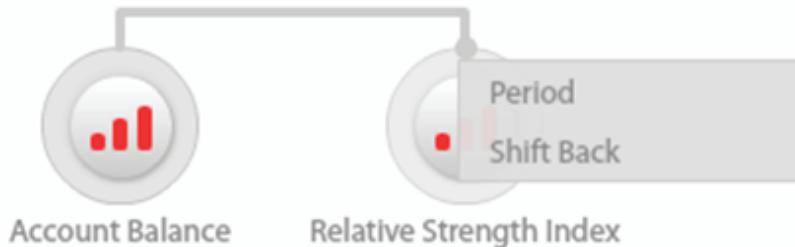
Consider for example the following three nodes:



Connecting the 'Max' node or the 'Ask' node to an 'AND' node cannot possibly make any logical sense since there is no condition to be satisfied in order for our statement to be true. Attempting to connect the 'Ask' node to 'Max' however makes perfect sense since it will represent one of the values to be compared in order to derive the maximum - $\text{Max}(\text{Ask}, \text{Value2})$.

Nodes that do connect are not necessarily right for each other!

Connecting the ‘Account Balance’ node to the RSI is permissible, since the oscillator may receive input values for both its ‘Period’ and ‘Shift Back’ to be used in the calculations. But does this make any sense?!



The importance of direction in connecting two Nodes

Can you spot the difference between the two combinations presented below?



Case A



Case B

They might look alike at first glance but in Case A the ‘Bollinger Bands’ node connects to the ‘Arithmetic’ node, while in Case B the exact opposite happens.

This makes a huge difference!

This becomes obvious by reviewing the Parameters Boxes of each case. In Case A the ‘Bollinger Bands’ calculated value has been used as an external input to substitute for ‘Value1’ used in the calculation of the ‘Arithmetic’ operation (BB Value +2 in this case). In Case B, however, it is the sum derived by the Arithmetic operation that is used as a parameter to derive the ‘Bollinger Bands’, substituting for the ‘Period’ in the calculations. This is a totally different operation!

Arithmetic

Value 1	{Bollinger Bands}
Operation	+
Value 2	2

Case A

Bollinger Bands

Symbol	
Time Frame	Current
Period	(Arithmetic)
Deviation	2
Bands Shift	0
Applied Price	Close Price
Output Value	Upper Line
Shift Back	0

Case B

D.The ‘Magic Index’

As you may have probably noticed by now, for all nodes that involve trading operations there is a mysterious ‘Magic Index’ parameter. There is even a ‘Magic Index’ node under the Trade group of functions in FxPro Quant.

So what is this number about?

Every time a new order is opened by an EA in the MT4, a unique number, called the ‘Magic number’ is assigned to it. This parameter is used in MQL4 as a reference in order to enable Expert Advisors to differentiate between the orders they have opened and those opened by another EA or manually by the user.

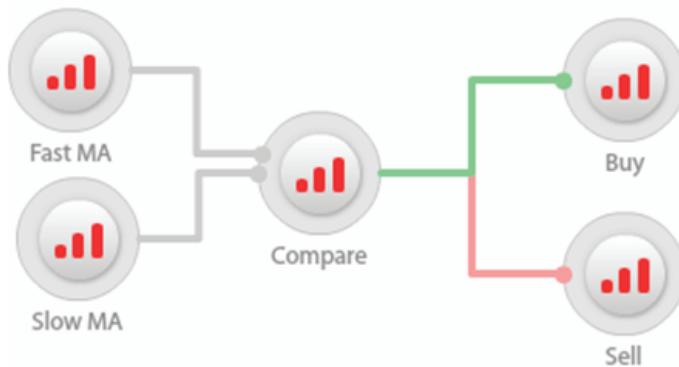
The ‘Magic Index’ parameter in FxPro Quant, adds some digits at the end of an order’s ‘Magic number’ so that by referencing it, we can instruct our EA to act upon those particular open positions, to either modify, close or even return information on those trades.

Open Position

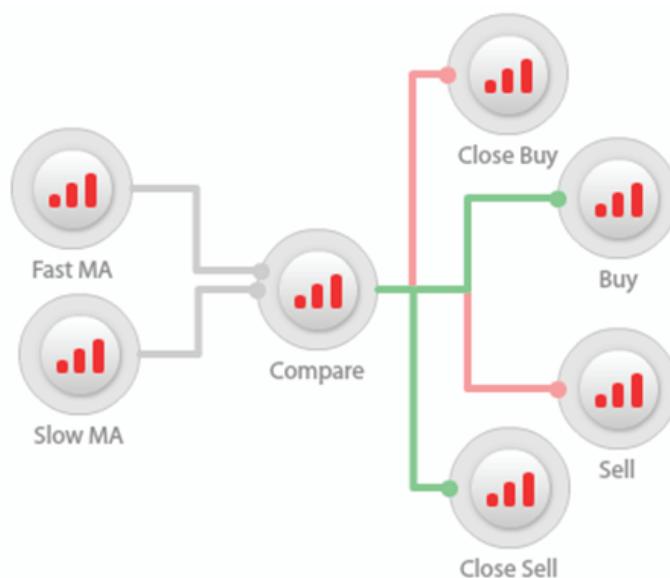
Trigger	Unconnected
Magic Index	0
If no orders	True
Symbol	
Side	Buy
Lots (0 = all)	0.1
Slippage	0
Stop Loss points	0

Let's take an example:

Consider that an EA is built in order to initiate Buy and Sell orders based on a simple Moving Average crossover system. This means that the system will be opening both types of trades whenever these conditions are met. It will perform a Buy order whenever the fast MA crosses above the slow MA and a Sell order whenever the opposite happens.

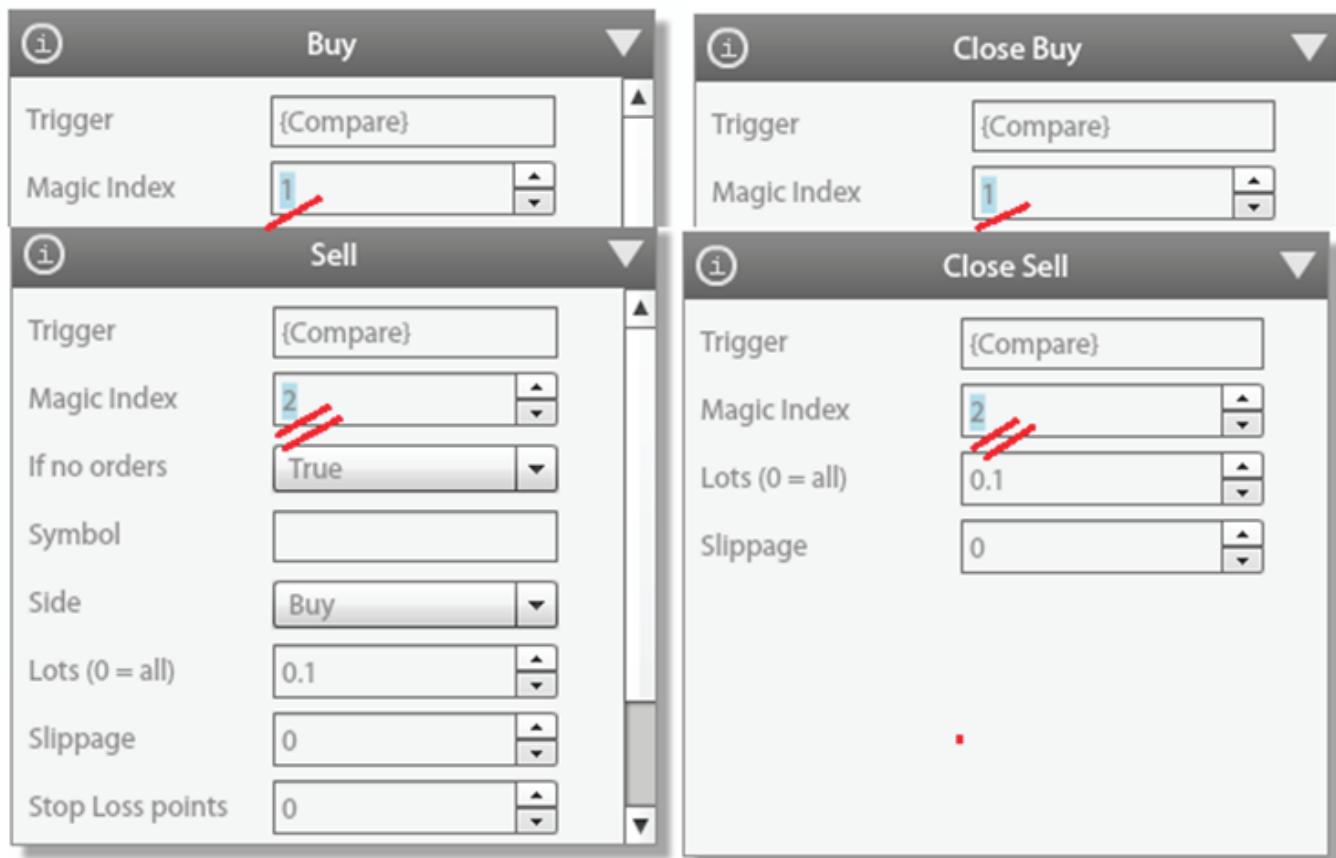


Now, consider that we also want to instruct our EA to close these trades when the reverse happens. That is, to close the Buy trade when the fast MA once again crosses below the Slow MA and vice versa.



So, how would our system know which of them to close if we instruct it to close the Buy orders only?!

That is where our ‘Magic Index’ is of use:

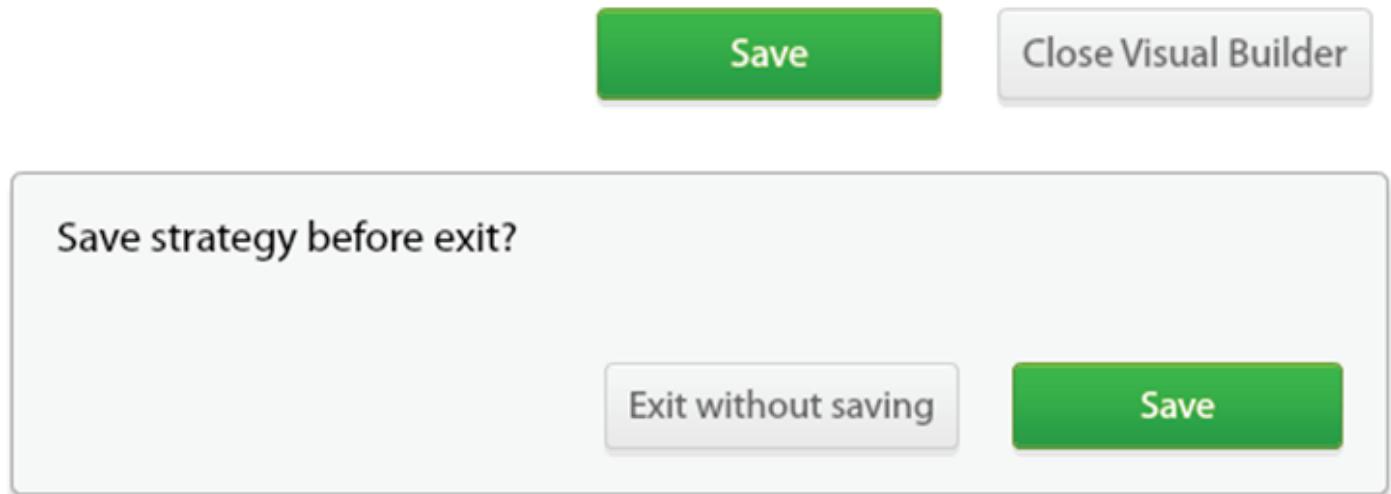


By using the same ‘Magic Index’ for ‘Buy’ and ‘Close Buy’ (say 1) and a separate ‘Magic Index’ for ‘Sell’ and ‘Close Sell’ (say 2) the system recognises which orders to close.

In **FxPro Quant** under the ‘Trade’ node there is also a ‘Magic Index’ node that allows the Index’s number to be set as an external input linked directly to other nodes. That is, to be used in a similar manner as the ‘Number Input’ is used in the example found in the ‘Defining Function Values’ section of this manual.

6. Save & Export

To save and export our EA just press the ‘Save’ button on the top right corner or head directly for the ‘Close Visual Builder’ button in which case you will get a popup window asking whether you want to ‘Save your strategy before exit’.



7.FxPro Quant Functions (Nodes)

1. Indicators

Accelerator/Decelerator

The AC is used to measure acceleration/deceleration of the current driving force, therefore used to predict the change of the driving force on the market. The AC changes direction before any changes occur in prices, so it provides an earlier warning.(Bill J. Williams)

Accumulation/Distribution

The Accumulation/Distribution tracks the relationship between price and volume and acts as a leading indicator of price movements. The indicator uses volume to confirm price trends or warn of weak movements that could result in a price reversal.(Marc Chaikin)

Average Directional Movement

The ADX system is designed to primarily determine whether a traded instrument is trending and if so in what direction. (J. Welles Wilder)

Alligator

The Alligator is a trend identification tool that makes use of 3 Moving Averages to represent the movements and interaction between different time periods. Designed to detect the beginning and exhaustion of trends, this indicator will typically perform poorly in ranging markets.(Bill J. Williams)

Average True Range

The ATR is a measure of volatility. It is a moving average of the True Ranges. (J. Welles Wilder)

Awesome

The AO is designed to show the current market momentum. It is created using the difference between the 34-period and 5-period simple moving averages of the bar's midpoints $(H+L)/2$.(Bill J. Williams)

Bears Power

The Bears' Power indicator shows the strength of the Sellers. If the indicator is below zero, the bears are strong; if it is above zero, they are weak. The indicator aims at identifying if a bearish trend will continue or if the price has reached a point where it might reverse.(Alexander Elder)

Bollinger Bands

The Bollinger Trading Bands® wrap around the price chart measuring volatility, widening during volatile markets and contracting during calmer periods.
(John Bollinger)

Bulls Power

The Bulls' Power indicator shows the strength of the Buyers. If the indicator is above zero, the bulls are strong; if it is below zero, they are weak. This indicator aims at identifying if a bullish trend will continue or if the price has reached a point where it might reverse.(Alexander Elder)

Bill Williams Market Facilitation

The MFI attempts to determine the efficiency of price movement by quantifying the price movement per unit of volume.(Bill J. Williams)

Commodity Channel Index

The CCI measures the variation of the underlying instrument's price from its statistical mean.(Donald Lamber)

De Marker

Based on the comparison of the period maximum with the previous period maximum, the DeM Indicator attempts to measure the demand for the underlying instrument. The index is used to determine overbought/oversold conditions.
(Tom Demarker)

Envelopes

The Envelopes trading bands define the upper and lower boundaries of an instrument's normal trading range. They are comprised by two moving averages shifted upward and downward.

Force Index

The FI is an indicator that uses price and volume to assess the power behind a move or identify possible turning points. The FI combines direction, extent and volume as an oscillator that fluctuates in positive and negative territory as the balance of power shifts.(Alexander Elder)

Fractals

The Fractal Indicator uses a series of at least five successive bars in order to identify resistance/support levels and it is used in order to try and determine turning points.(Bill J. Williams)

Gator

The Gator oscillator tracks the periods when the Alligator indicator balance lines widen or narrow down (convergence/divergence). As a trend indicator, it is most useful during strong directional trends.(Bill J. Williams)

Ichimoku

The Ichimoku Kinko Hyo is a moving average-based trend identification system that builds on candlestick charting aiming to improve the accuracy of forecast price moves. It factors in time as an additional element along with the price action. (Goichi Hosoda)

MACD

The MACD is a trend-following indicator based on the relationship between two exponentially smoothed moving averages of the closing prices. (Gerald Appel)

Momentum

The Momentum indicator measures the amount an instrument's price has changed over a given period of time.(J. Welles Wilder)

Money Flow Index

MFI measures the strength of money flowing in and out of an instrument over a given time span. It is related to the RSI but also accounts for volume.(Gene Quong, Avrum Soudack)

Moving Average

A Moving Average is an indicator that takes the average value of a security over a given period of time.

On Balance Volume

The OBV is a momentum indicator that relates volume to price change. It is a running total on volume showing the money flowing in and out of an instrument.
(Joe Granville)

Parabolic SAR

The Parabolic Stop & Reverse is a trend-following system constantly tailing the price action, often used by traders as a “trailing price stops” setter. The aim is to pinpoint when there is a higher-than-normal probability of a trend reversal.
(J. Welles Wilder)

Relative Strength Index

The RSI is a smoothed price-following oscillator with a range of 0-100 and is a very popular countertrend oscillator. This setup works best in a range environment when overbought/oversold readings are more likely to signal a change in direction.
(J. Welles Wilder)

Relative Vigor Index

The RVI compares the positioning of a security's closing price relative to its price range, and the result is smoothed using an exponential moving average of the values. The idea behind RVI is that the energy of the move is established by where the prices end up at the close.

Standard Deviation

The Standard Deviation is a statistical measure of volatility typically used as a component for other indicators.

Stochastic

The K%D compares where the underlying instrument's closing price is relative to its price range over a given period of time, based on the observation that prices tend to close near the extreme of the trading range during uptrends/downtrends.
(George Lane)

Williams' Present Range

Williams's %R is a momentum indicator measuring overbought/oversold levels. It is similar to the Stochastic Oscillator except that it is plotted upside-down.
(Larry Williams)

2.Input

Boolean input

Specifies a boolean external input for the whole EA. e.g. True/False

Number input

Specifies a decimal number external input for the whole EA.

e.g. 1, 1.12345, -5.12323 -0.0001

Integer input

Specifies a whole number external input for the whole EA. e.g. 123, -321

String input

Specifies a text external input for the whole EA. e.g. MyEAName, EURUSD

3.Math

Absolute

Returns the absolute value of the specified numerical input. e.g. -2 will return 2 and 2 will return 2

Arithmetic

Returns the result of a basic arithmetic operation. Addition, subtraction, multiplication and division (+,-,*,/)

Exponential

Returns the value of e raised to the power of specified numerical input.

Logarithm

Applies the natural logarithm function to the specified numerical input. e.g. log(123)

Max

Returns the largest of the two specified numerical inputs.

For example Max(4,5.6) = 5.6

Min

Returns the smallest of the two specified numerical inputs. For example Min(4,5,6)=4

Mod

The function returns the floating-point remainder of division of two numbers.

For example if $x=-10$ and $y=3$, since $x=a(y)+b \Rightarrow -10=-3(3) -1$

$$\ggggg b = \text{MathMod}(x,y) = -1$$

Power

Raises the specified numerical input to the specified power. e.g. 4 to the power of 2 will return 16

Random

A random value is chosen from a range of values specified by the user. Choosing 'Reset with time' will enhance operation.

Round

Round a decimal number to the specified level of precision or alternatively introduce a ceiling or a floor.

Square root

Returns the square root of specified numerical input.

For example Square Root(16)=4

Trig

Applied a trigonometric function to a given numerical input. e.g. Sin, Cos, Tan etc.

4.Logic

Compare

Ability to compare two different values in terms of equal, larger/smaller ($=$, \geq , \leq , $<$, $>$). This node is triggered if the condition set - the comparison of two values evaluates to true. E.g. if $\text{Value1} \geq \text{Value2}$

AND

Ability to add together a number of different conditions. The node is triggered when all of its inputs nodes are triggered. Please note that only other logic operations can be connected to an 'AND' function (Compare, AND, OR). It is possible to combine several 'AND' functions in a single statement which is useful when creating complex expressions.

OR

Ability to check if either (or all) of the conditions connected are valid. The node is triggered if at least one of its input nodes is triggered. Please note that only other logic operations can be connected to an 'OR' function (Compare, AND, OR). It is possible to combine several 'OR' functions in a single statement which is useful when creating complex expressions.

5.Trade

Magic Index

The 'Magic number' is one of the parameters of the `OrderSend()` function, used in MQL4 to open a new order. It is a unique number assigned to your orders as a reference that enable EAs to differentiate between the orders that opened and those orders opened by another EA or manually. This node allows the 'magic number' to be set centrally and then linked directly to other nodes

No Orders

Returns 'True' if there are no open trades for any of the specified magic indices

Order Status

Checks whether an order with specific magic index has the specified property, e.g. if it is a Buy/Sell order, if it is market or pending order etc.

Order Data

Extracts specified piece of information from an order with the specific magic number. Order ticket, Open Price, Profit, Stop Loss etc.

Open Position

Opens a market order whenever the node is triggered, either long or short according to ‘Side’ preference set by the user.

Send Pending

Opens a pending order whenever the node is triggered. The price is either an absolute price value e.g. 1.12345 or a number of points above/below current price eg. 200

Close Position

Closes a market order with the specified Magic index, whenever the node is triggered

Delete Pending

Deletes a pending order with the specified Magic index, whenever the node is triggered

Modify Position

Modifies an open order’s Stop-loss or Take-profit levels. The order is recognized by its specified Magic Index.

Modify Pending

Modifies a pending order’s Stop-loss or Take-profit levels. The order is recognized by its specified Magic Index.

6. Info

Account

Contains all the available account information. Balance, Equity, Free Margin, Profit etc.

Last error

Returns the error ID of last error that has occurred during the EA execution, eg returns 130 if failed to send order due to invalid stops. A list of possible errors can be found at: <http://docs.mql4.com/constants/errors>

Leverage

Returns the maximum leverage allowed for the account.

Period

Please note that if for example we are using a 3 hour chart, this function will return the number of minutes included in this timeframe in a numerical form, that is 120.

Point

Shows the minimum price change of the current Symbol eg for EURUS will return 0.00001. Please note that one point for each currency pair is equal to 1/10 of its Pip.

Status

Contains the information of the current platform state. e.g. Connection to broker, Demo or live account, backtest or live trading etc.

Digits

Returns the number of digits after the decimal point in the quote of the current price, e.g. for EURUSD returns 5 and for USDJPY returns 3

7. Market Data

Ask

Ask price of the latest tick. This is the lowest quoted offer price among the available Sellers.

Bid

Bid price of the latest tick. This is the highest quoted offer price among the available Buyers.

First tick

This node triggered on the first tick of every new Bar.

Historic data

Bar chart data (High, Low, Open, Close etc.).

Instrument Info

Instrument specific info (Minimum Lot, Spread etc.).

8.Output

Alert

Ask price of the latest tick. This is the lowest quoted offer price among the available Sellers.

Print error text

Prints the last error that occurred during EA execution to the Experts tab.

Print Log

Prints the specified message to the Experts tab requires bullion to connect to.

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